

Work Order ID 149332

July 22, 2016 2:42:26 PM

149332

AMOD DG

Page 1

Item ID: D3443-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Strut Weldment Assembly

Start Date: 9/23/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 9/30/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

SH

Date: 7/25/16

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3443

Rev C

100

Weld per dwg A/R S.S. rod Batch: 413444
Large Fab

0.00

100

Large Fab

Memo

0.15

Large Fab

Weld assembly as per dwg D3443

6 16-10-31

110

QC9- Inspect visual per QSI004- Fusion Welds

0.00

110

QC

Memo

0.00

Quality Control

6 16-10-31DAS
9
9-89

120

QC5- Inspect part completeness to step on W/O

0.00

120

QC

Memo

0.02

Quality Control

6 16-10-31DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

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Page 2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
131	Spray Painting per QSI005 4.2	0.00							
131									
SprayPaint	Memo	0.00				6			<i>[Signature]</i>
Spray Painting	PRIME AS PER QSI 005 PRIME BATCH <u>135654</u>								7-11-16
	PAINT AS PER QSI 005 DRAB GREEN BATCH <u>135932</u>								
132	QC21- Final Inspection - Work Order Release	0.00							
132									
QC	Memo <i>N/A</i>	0.00							
Quality Control									
140	QC3- Inspect Part Finish	0.00							
140									
QC	Memo	0.01				6			<i>[Signature]</i>
Quality Control									DAS 38 9-89 NOV 08 2016

Work Order ID 149332

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149332

Page 3

Item ID: D3443-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Strut Weldment Assembly

Start Date: 9/23/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 9/30/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Identify as per dwg & Stock Location: GA

0.00

150

Packaging

Memo

0.01

Packaging

ex16/4/09DAS
36
9-89

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.10

Quality Control

DAS
21
9-89

NOV 09 2016

Picklist Print

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Page 1

Work Order ID: 149332

149332

Parent Item: D3443-043

D3443-043

Parent Item Name: Strut Weldment Assembly

Start Date: 9/23/2016

Required Date: 9/30/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV. A 05.11.17 NEW ISSUE EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3443-3		Manufactured	No			100	Each	13.0000	1	6			
---------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

D3443-3

Clevis

EQ 16-10-27

Location

Loc Qty

Loc Code

149365x6

WA002

13

146837

13

D3443-7

Manufactured No

100 Each 4.0000 1 6

D3443-7

Tubing

EQ 16-10-27

Location

Loc Qty

Loc Code

149327x6

WA002

4

144739

4

D3966-4-750

Manufactured No

100 Each 171.0000 1 6

D3966-4-750

Pin, Dowel

EQ 16-10-27

Location

Loc Qty

Loc Code

WA002

171

126225

171

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

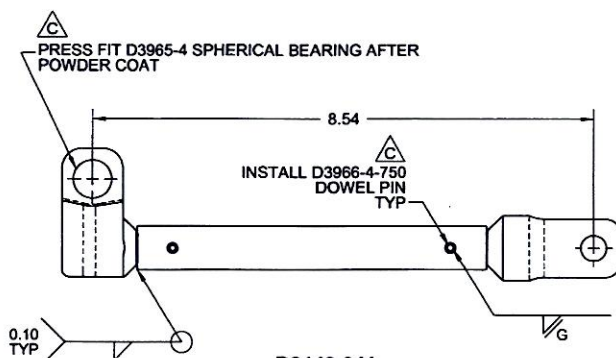
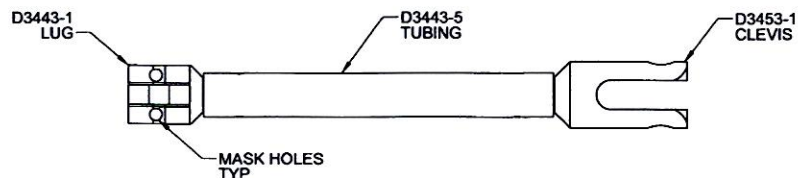
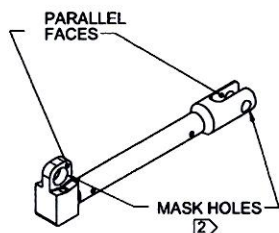
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 			
Description Work Order Deviation				Disposition							
								Completed By			
								Lead hand / Supervisor Approval Verification			
								QC / QA Coordinator Approval			

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

8 7 6 5 4 3 2 1



D3443-041

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.33 lbs
- 8) WELD PER DART QSI 004

ITEM	QTY	P/N	DESCRIPTION
1	X	D3443-041	STRUT WELDMENT ASSEMBLY
2	1	D3443-1	LUG
3	1	D3443-5	TUBING
4	1	D3453-1	CLEVIS
5	1	D3965-4	BEARING, SPHERICAL
6	2	D3966-4-750	PIN, DOWEL

RELEASED
09/08/25 MP

C	DRAWING UPDATED TO CURRENT STANDARDS. REVISED NOTE #2 (ZN A8-1, A8-2); 0.820 WAS 0.720 & 1.43 WAS 1.53 (ZN C2-3); 0.551 WAS 0.451 (ZN C1-3); R0.219 WAS R0.050 (ZN C4-3); D3965-4 WAS SPAENAU P/N (ZN C6-1, B5-2); D3966-4-750 WAS MCMASTER-CARR P/N (ZN B5-1); REF PAR 09-018	RF	09.06.25
B	ADDED -9 PIN, REMOVED BALL PLUNGER; REVISE TOLERANCE, & 90.125 WAS #30	RF	05.12.05
A	NEW ISSUE	RF	05.09.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.06.25		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3443** REV. C
SHEET 1 OF 4
TITLE **STRUT WELDMENT ASSEMBLY** NTS
SCALE

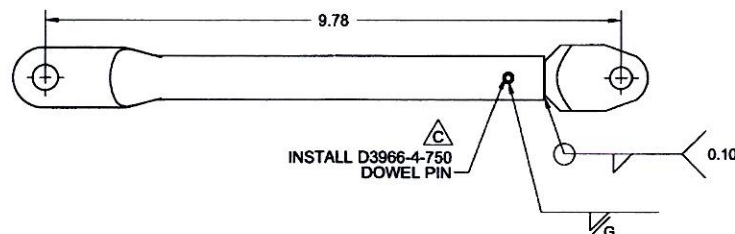
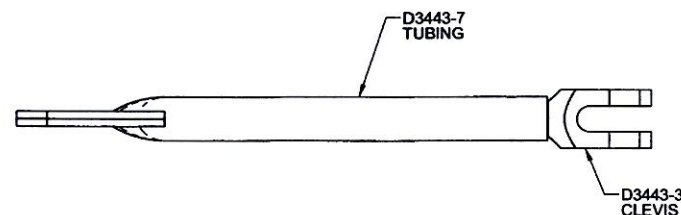
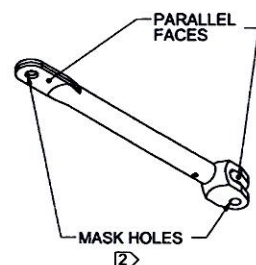
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5# 7/25/16 149332

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

ITEM	QTY .043	P/N	DESCRIPTION
1	X	D3443-043	STRUT WELDMENT ASSEMBLY
2	1	D3443-3	CLEVIS
3	1	D3443-7	TUBING
4	1	D3966-4-750	PIN



D3443-043

RELEASED
09/06/25/14

NOTES:

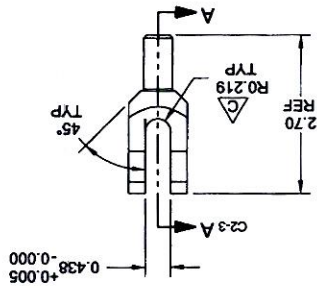
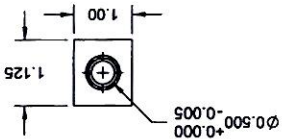
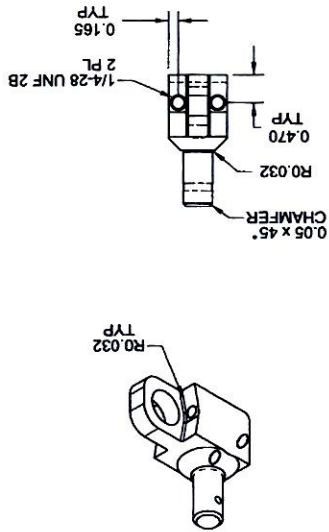
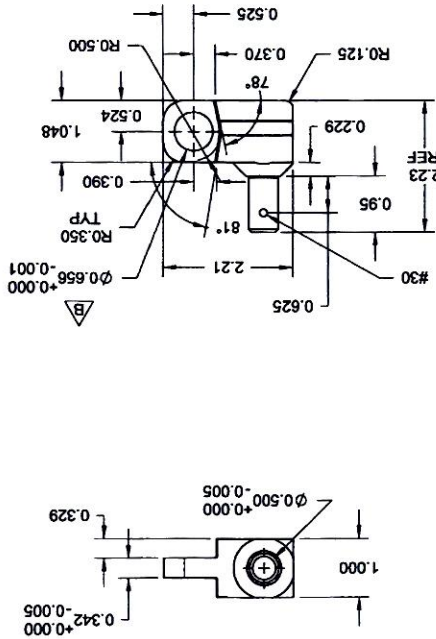
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.97 lbs
- 8) WELD PER DART QSI 004

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D3443	SHEET 2 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	STRUT WELDMENT ASSEMBLY	NTS
DATE	09.06.25	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. WHO IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

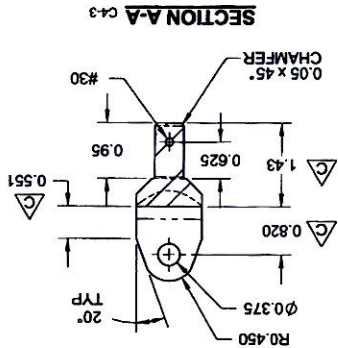
8 7 6 5 4 3 2 1

- NOTES:**
- 1) MATERIAL: D3443-1 = 17-4 SS PER AMS 5604/5643 (REF DART SPEC M17-4B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: D3443-1 = 0.50 lbs
D3443-3 = 0.35 lbs

D3443-1 LUG

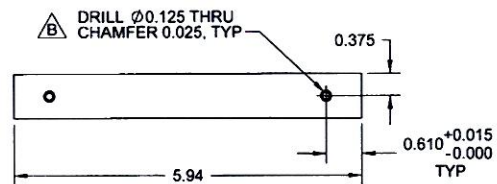


D3443-3 CLEVIS

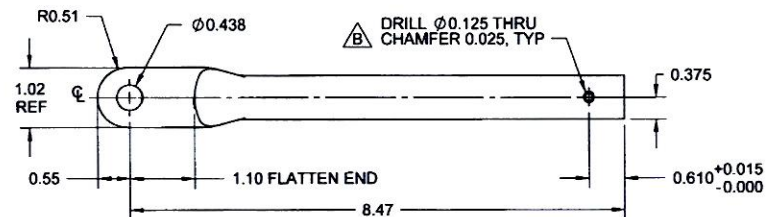
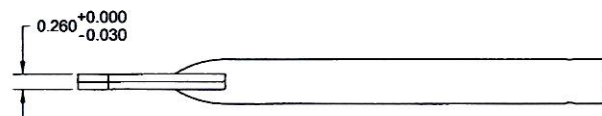


DESIGN	RF	DATE	09.06.25
DRAWN	RF	DE APPR.	
CHECKED	RF	APPROVED	
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TITLE	STRUT WELDMENT ASSEMBLY	SCALE	
SHEET 3 OF 4		REV. C	
DART AEROSPACE LTD			
HAWKESBURY, ONTARIO, CANADA			

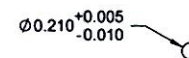
RELEASED
01/28/25



D3443-5 TUBING



D3443-7 TUBING



D3443-9 PIN

D3443-9 NOTES:

- 1) MATERIAL: DELRIN II 150R OR ACETRON GP ACETAL (REF. DART SPEC M-DELRIN-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A

RELEASED
01/25/25

D3443-5/-7 NOTES:

- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC M304TR0.750W.120)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.025 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3443-5 = 0.41 lbs
D3443-7 = 0.62 lbs

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D3443	SHEET 4 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	STRUT WELDMENT ASSEMBLY	NTS
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